# CLINICAL MEDICINE

## ORIGINAL ARTICLES



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# Making up for lost time

"After the baby comes . . ." For months that refrain has prefaced each promise to herself—for a new suit, hours in the beauty shop, all the rich foods she had refused for the sake of her prenatal diet. A postnatal diet doesn't seem so important to her, especially if she is not nursing the baby—and common-sense eating is no match for her newly-released appetite. Many physicians continue a dietary supplement of DICALDIMIN Capsules to assure an adequate supply of minerals and vitamins which have been unduly drawn on during pregnancy, and to aid the return to normal health. DICALDIMIN supplies protective amounts of both minerals and vitamins: iron, calcium, phosphorus and vitamin D, plus B complex factors. DICALDIMIN provides a sufficient amount of vitamin D in the form of viosterol to meet the entire requirement for this factor during pregnancy and lactation. And the new DICALDIMIN WITH VITAMIN C furnishes still another vitamin commonly lacking in the national dietary. DICALDIMIN Capsules and the new DICALDIMIN WITH VITAMIN C are available now through prescription pharmacies everywhere in bottles of 100 and 1000.

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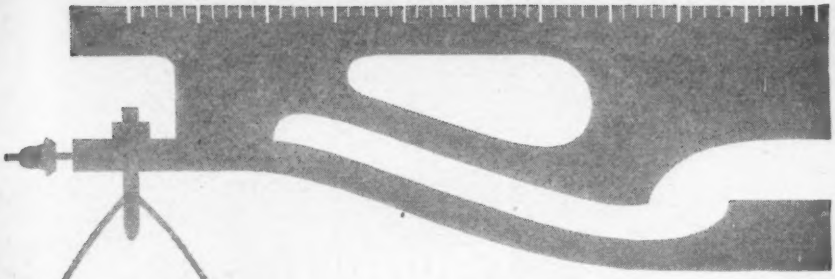

# compensation in milligrams...

Bioassay units express the relative potency of a drug as indicated by species response—but *a milligram is always a milligram,* constant and unchanging. In digitalization, Digoxin, prescribed in milligrams of pure crystalline glycoside, makes possible a degree of dosage accuracy unobtainable with biological units. In addition to all the therapeutic virtues of digitalis leaf, Digoxin offers (1) the precision and easy control of the crystalline form, (2) a minimum of local gastro-intestinal irritation, (3) prompt and uniform absorption, (4) slow or rapid digitalization and (5) shorter duration of symptoms of over-digitalization.

**ORAL PREPARATION:**
'Tabloid' brand Digoxin, 0.25 mgm. (gr. 1/260 approx.)
Bottles of 25, 100 and 500.

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***Oral digitalization:*** 0.75 to 1.5 mgm. followed at 6-hour intervals with further doses of 0.25 mgm. until the desired effect is obtained.

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*A Journal Devoted to the Advancement of General Practice*

*Published Monthly by the*
AMERICAN JOURNAL OF CLINICAL MEDICINE, INC.
307 West Washington Street, Waukegan, Illinois

GEORGE B. LAKE, *Publisher* RALPH L. GORRELL, M.D., *Editor*




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**JUNE, 1948 — VOL. 55, NO. 6**


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*Reentered as Second Class Matter October 19, 1940, at the Post Office at Waukegan, Ill., under Act of March 3, 1879. Additional entry as Second Class Matter August 1, 1942, at the Post Office at Wilmette, Ill.*

*one and one-half acres*

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fluid that inundates the tissues during congestive heart failure may pass through approximately one and one-half acres of capillary wall. Following an intramuscular or intravenous injection of MERCUHYDRIN, edema fluid comprised of water and salts, chiefly sodium chloride, is mobilized back through the one and one-half acres of the capillary bed and is eliminated through the kidneys. The diuresis obtained with MERCUHYDRIN benefits not only the patient with palpable edema, but also the patient subject to cardiac decompensation. "The effect on dyspnea in these cases of left-sided failure is probably largely a result of diminution in pulmonary edema, even though the latter is clinically occult."*

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*Fishberg, A. M.: Heart Failure, Lea and Febiger, Phila., 1946, p. 733.

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# CLINICAL MEDICINE

**JUNE, 1948**

**Volume 55, Number 6**


ORIGINAL ARTICLES, NOTES, AND REPORTS:

Are solicited for publication with the understanding that they are contributed exclusively to this journal.

Material submitted may be forwarded to a Staff Consultant for discussion and if approved will be published as soon as space, timeliness, and appearance of previously accepted articles permit.

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### *Miscellaneous*

# RIASOL Leads the Parade in PSORIASIS

**More and more physicians and their grateful patients are learning that RIASOL is definitely a leader in the field of psoriasis. It has earned its reputation on the basis of the superior results it has produced in an oftentimes baffling disease.**

**RIASOL clears disfiguring, psoriatic lesions promptly in so many cases.**

**RIASOL often reduces the incidence of recurrences to a marked degree.**

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**Apply daily after a mild soap bath and thorough drying. A thin, invisible, economical film suffices. No bandages necessary. After a week, adjust to patient's progress.**

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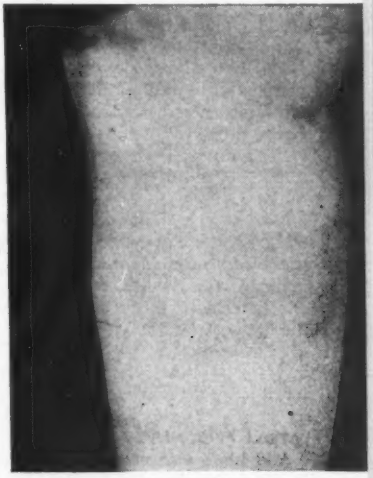

*After Use of Riasol*

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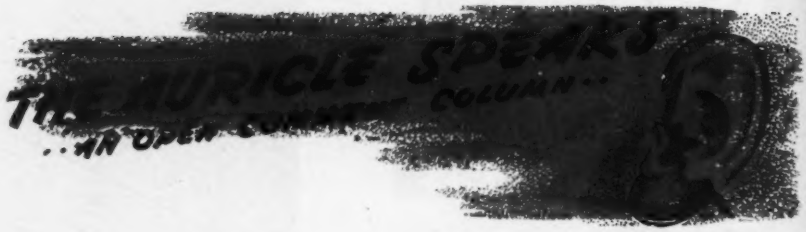
# RIASOL for PSORIASIS




## The Problem of the Disputed Check

"Kindly send check to cover enclosed account by return mail." Dr. Medico wrote, and sent the letter air-mail.

"Am sending check as requested," the patient wrote in reply, enclosed the check, and placed the letter in Uncle Sam's mail box.

But Dr. Medico owed John Doe, Doe learned that the patient owed Dr. Medico, and served a garnishee order on the patient.

"I mailed a check to cover the bill about 10 minutes ago," the patient explained.

"Well, you'll have to get the letter back from the postoffice or stop payment of the check and pay me, for the general rule is that the title of a mailed check remains in the sender till it reaches the drawee," Doe contended.

"I'm no lawyer, and I'm just guessing, but I say that when Dr. Medico asks for a check to be sent by mail, it's his as soon's it goes in the mail box," the patient averred.

And his guess was a lucky one, as the Indiana Courts upheld his argument in Bank vs Holtschaw, 98 Ind. 87, and decided that Dr. Medico could hold the check.—Judge M.L.H.

## Treatment of the Enlarged Spleen

When radioactive materials, such as radio-phosphate are made into a colloid and injected intravenously in animals, nearly 100% of this material localizes in the spleen and liver. The tissues of the spleen are highly radio-sensitive, the liver tissue is less so, and as a result of this selective radiation, it is possible to remove the spleen bloodlessly. This is entirely experimental and is of interest with reference to the physiology of the reticulo-endothelium system — JOHN H. LAWRENCE, M.D., (University of California) in *The Doctors Talk It Over*, Feb. 17, 1947.

## Urethane for Leukemia and Cancer

*To the Editor:*

Our experience with urethane in the treatment of cancer is very limited. The case which I reported in the Journal of the American Medical Association was the most striking therapeutic response we have seen. I have just learned that this man died last month in Minnesota. His remission apparently lasted a little over four months. Whether this could have been duplicated with x-ray therapy or not we do not know. The radiologists,

both here in Portland and at the Mayo Clinic, felt that nothing could be gained by radiotherapy. We have had several other cases of metastatic neoplasia under treatment. Many of them have not responded at all. In several other instances there has been an appreciable arrest in the growth of the tumor. In only one has there been any evidence or regression, aside from the dramatic case referred to above. Apparently urethane will duplicate or simulate the effects of radio-therapy in certain very anaplastic tumors. A great deal of study and observation is necessary before one will know whether it will have any definite therapeutic role in this field.

In the threatment of leukemias the drug's effect is most remarkable. Apparently the best effects of radiation therapy can be duplicated by giving this simple drug by mouth. This was the experience of the British investigators (Paterson and her group), and it has been our experience. Both lymphatic and myelogenous leukemias apparently respond quite well. There is no way of determining in advance the type of response one will obtain. This, of course, is also true of radiation therapy.

Most patients tolerate three grams of the drug each day with no difficulty. We are having it put up in enteric tablets of five grains each, and the patients take three tablets three times daily. We have given a couple of the patients the drug by rectum. I have just noted a report in a Swiss medical journal which suggests that the drug can be given parenterally if it produces nausea by mouth.

I have not as yet had any experience with the drug in radio resistant leukemias. The British workers found that it occasionally works.—MORTON J. GOODMAN, M.D., Portland, Oregon.

(Urethane: Ethyl carbonate $C_2H_5O$-CO. $NH_2$ a crystalline hypnotic, antipyretic and antispasmodic.—Ed.)

*A shoe designer says that a woman's feet tend to get wider as she gets older. We hasten to remark that that isn't all.*

*Any old chunk can float downstream but it takes a live fish to go upstream.*

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...has everything

# A *Natural* in Salicylate Therapy
# ELIXIR ALYSINE

*A Distinctive Combination of Merrell's Natural Salicylate and Alkaline Salts*

In the symptomatic treatment of the common cold, influenza, la grippe, tonsillitis, rheumatic fever and arthritis, Elixir Alysine is the *natural* choice.

Containing *natural* salicylates prepared solely from oil of sweet birch, together with selected alkaline salts, Alysine provides fast, intensive salicylization with a minimum of gastric irritation or systemic acidotic tendency.

In a palatable, aromatized solution, Elixir Alysine is immediately assimilable for quick therapeutic response and readily adaptable to fractional dosages.

*Used adjunctively with the sulfas*, Alysine provides an alkaline (tolerance) factor, and at the same time helps to relieve muscular aches and pains.

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**Elixir Alysine,** containing approximately 0.3 Gm. (5 grs.) natural sodium salicylate and 0.6 Gm. (10 grs.) alkaline salts per teaspoonful, in 4-oz., pint and gallon bottles.

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**Alysine Powder,** containing approximately 0.6 Gm. (10 grs.) natural salicylates and 1.2 Gm. (20 grs.) alkaline salts per level teaspoonful, in 1-oz., 4-oz., and 1-lb. bottles.

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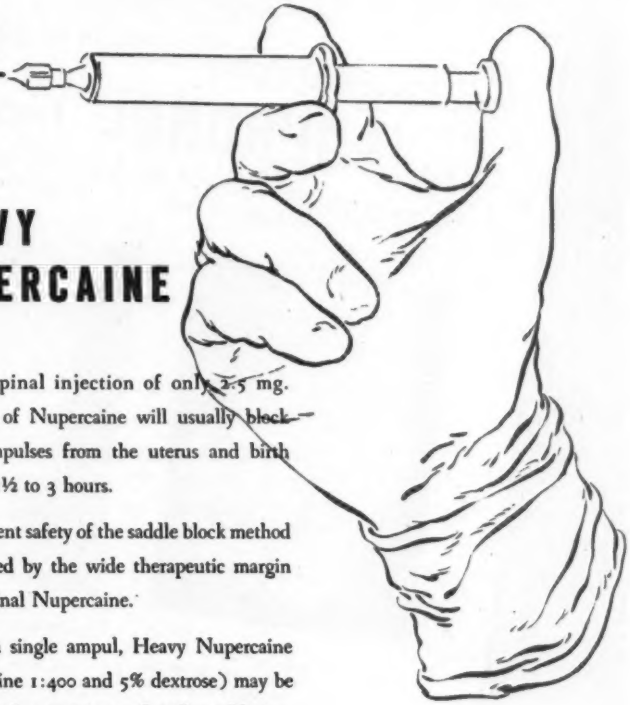
safe prolonged obstetric analgesia

saddle block with

# HEAVY NUPERCAINE



An intraspinal injection of only 2.5 mg. (1/25 gr.) of Nupercaine will usually block sensory impulses from the uterus and birth canal for 1½ to 3 hours.

The inherent safety of the saddle block method is enhanced by the wide therapeutic margin of intraspinal Nupercaine.

Now in a single ampul, Heavy Nupercaine (Nupercaine 1:400 and 5% dextrose) may be injected without mixing and without dilution.

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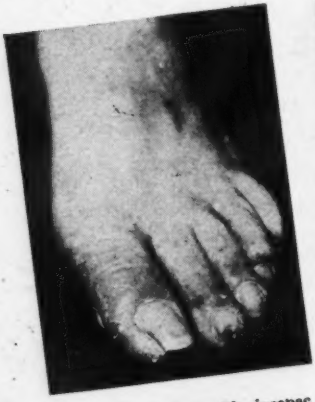
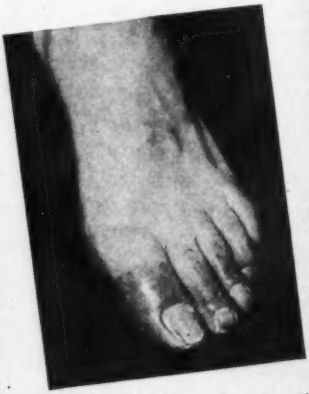
NUPERCAINE (brand of dibucaine) Trade Mark Reg. U. S. Pat. Off.

# Dermatophytosis treated with SOPRONOL® Improved

J. H.–Dermatophytosis of the feet–incapacitated; returned to work in two days



J. H., white male, age 29—incapacitated. Both feet acutely inflamed, with weeping, vesiculation, scaling. Skin was brawny, violaceous in color. Marked pain and pruritus.



Ninth day of treatment with powder and solution, Sopronol Improved. "Marked healing"—absence of symptoms, no evidence of continued activity of infection. Skin discoloration now a pale pink.

**OINTMENT**

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|---|---|
| Sodium propionate | 12.3% |
| Propionic acid | 2.7% |
| Sodium caprylate | 10% |
| Zinc caprylate | 5% |

1 oz. tube preferable for use at night

**POWDER**

| | |
|---|---|
| Calcium propionate | 15% |
| Zinc propionate | 5% |
| Propionic acid | 0.25% |
| Zinc caprylate | 5% |

2 oz. canister for daytime dusting

**LIQUID**

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| Sodium propionate | 12.3% |
| Propionic acid | 2.7% |
| Sodium caprylate | 10% |

2 oz. bottle convenient for office treatment

Wyeth®

PHILADELPHIA 3, PA.


# H.11 Extract

## *A Brief Account of its Preparation, Standardization, Experimental and Clinical Results*

*By* G. J. W. OLLERENSHAW, M.A., B.M., B.Ch.
*Clinical Director, Hosa Research Laboratories, Sunbury-on-Thames, England*

### *Introduction*

EVIDENCE of the existence of growth-inhibitory substances in the body has been produced by various workers. In 1932, Robinson and Thompson (1) demonstrated the retardation of somatic growth resulting from the administration of extracts of parathyroid gland, and this was later confirmed by Thompson and Huxley (2). Similar growth-inhibitory extracts were obtained from urine (3, 4, 5, 6) and such extracts were also shown to possess the property of inducing regression in malignant tumours in animals (7, 8). Several publications have been made detailing the progress made experimentally (9, 10, 11, 12, 13, 14) which has led to the development of the urinary extract known as H.11 extract. This, it must be emphasized, is a laboratory name, and has been retained for convenience since the commencement of its clinical use, in spite of modifications in the method of preparation.

### *Method of Preparation*

H.11 extract is prepared from a concentrate of pooled normal adult human male urine. After precipitation with absolute alcohol, the alcoholic solution is precipitated with ether at pH 3.0. The resultant filtrate is subjected to a water partition with ether at pH 3.0, and finally prepared as a neutral isotonic aqueous solution with the addition of 0.5 percent phenol as preservative, being packed in multiple-dose rubber-capped bottles. The process is carried out either in vacuo or under nitrogen, since there is some evidence that oxidation during preparation can destroy some of the activity.

Modifications in the method of preparation are made from time to time in the light of research progress. A new method is at the moment under laboratory and clinical investigation, and preliminary observations indicate that that there is hope of improved results from its use. In this modified method, the urine concentrate is extracted with toluene and subsequently chromatographed. Brief details of the method have been published (12).

### *Method of Standardization*

Since the precise chemical composi-

tion of the active principle/s in the extract is still largely unknown, bioassay is employed. The extract is administered intra-peritoneally twice daily in 0.5 ml doses to six-week old male mice bearing growing transplanted Twort carcinomata averaging 20 sq. mm. in area. The tumours are measured again at the end of six days, and the degree of inhibition calculated in relation to the growth rate of the control (saline-injected) group. An active extract inhibits by 70 percent or more the growth rate of Twort carcinomata which, untreated, increase their size by 2½ times in six days. All extract is standardized batch by batch in this manner, and is then subjected to rigorous bacteriological control for asepsis.

*Pharmacology*

H.11 extract, in the doses and concentrations in clinical use, has few pharmacodynamic effects beyond inhibition of growth. Given intravenously, there is some stimulation of the lachrymal and salivary glands, but no effect on blood pressure, heart rate, or respiration.

In higher concentrations, prolongation of the period of ventricular diastole has been observed in the isolated frog heart, but this is purely transitory. Daily injections of the extract into normal rats for three weeks did not affect the blood count in any way. The involuntary muscles of the intestine, immersed in an H.11 solution, showed some increase in tone and movement, which was abolished by atropinisation.

Clinically, the extract has been found to be compatible with all drugs and preparations in normal use, including morphine, barbiturates, pethidine, physeptone, liver extract, iron, sulphonamides and penicillin.

*Animal Experimental Results*

Some thousands of Twort carcinoma-bearing mice have been treated with H.11 extract, and the evidence is clear that an inhibitory action on these tumours is obtainable when the extract is administered as described above. The experiments show that there is a definite optimum range of dosage, above or below which the effect is not so marked. Histological examination of regressing tumours shows that the first and main effect is on the periphery of the tumour. The cells in this area undergo pyknosis and vacuolation, and eventually become replaced by fibrous tissue. The process extends centrally until the whole tumour becomes fibrotic and markedly reduced in size. The final result is thus a small nodule of fibrous (scar) tissue.

*Clinical Use*

The clinical application of H.11 extract in cases of cancer was commenced in the latter part of 1940, using urinary extracts in arbitrary doses. At that time, many features regarding the treatment had not become apparent, and cases were regarded as significant which would not now be so regarded. The first series of cases treated (15) indicated that the method, as it then stood, had definite possibilities, and it is of interest to note that some of these initial cases are alive, well, and free from recurrence of disease at the time of writing (February 1948), having had no treatment for some years since the clearance of the lesions. They thus have a 7½-year survival period without recurrence.

*Method of Application*

Developments in the mode of application of the extract have taken place from time to time. Whereas in the early days the extract was given twice daily by intramuscular injection, since 1943 it has been possible so to concentrate the material that it can be given once daily by subcutaneous injection. This is the present method.

*Dosage*

This has been a problem owing to the fact that the precise chemical composition of the active principle/s is

still largely unknown. Dosage systems have therefore been evolved solely in the light of results. The current routine method involves a weekly rising scale of doses, as shown below. The doses are expressed in millilitres (c.c.).

1st day: 0.5 5th day: 2.0
2nd day: 1.0 6th day: 2.5
3rd day: 1.5 7th day: 3.0
4th day: 2.0 8th day: 0.5 (as 1st day).

It will be noted that the scale is repeated each week. Originally, a constant dose was employed, but the present routine yields better clinical results. Other methods of dosage have been investigated, and the results published (16). A method employing the highest dose which the patient could tolerate without developing symptoms of a general systemic reaction ("reaction dosage") was investigated, among others, since it was thought possible that good results would be obtained. The results were, however, disappointing, and helped to confirm that clinically, as well as experimentally, there is an optimum range of dosage, above or below which one does not achieve a satisfactory result. Another method used has been stabilization on constant daily doses, within the optimal range. The results, when this method has been routinely employed, have not been so good as with the weekly scale, but there have been some noteworthy cases in which, the weekly scale system having appeared to be losing its efficiency after a trial, a change to a stabilized dose has caused definite improvement (16). The method is therefore normally reserved for cases of this type. Small doses do not appear to be useful, again confirming the existence of an optimum range.

It has been found that strictly daily injection is necessary, and interruptions or premature cessation cannot produce the desired result. Since the material is non-toxic and safe, it can be administered by any competent person under professional supervision, and this necessity for daily injection can thus normally be satisfactorily arranged even in domiciliary practice.

*Duration of Treatment*

It is now clear that there is a latent period after the commencement of treatment during which no objective result becomes apparent, and during which growing tumours continue to grow. This latent period lasts, on an average, from two to three months. Brief treatment is therefore probably not of value. Subjective response, however, frequently occurs during this latent period. It is found that treatment should be continuous until all clinical and other signs of malignancy have completely cleared up.

*Blood Examinations*

The treatment is assisted by the presence of high serum calcium and low alkali reserve levels. These are accordingly estimated at periodic blood examinations, performed prior to the commencement of treatment and every eight weeks thereafter. In the United Kingdom, this is done at the Laboratories, specimens from remote patients being received by post. (The alkali reserve is estimated by the method of Conway, which obviates the necessity for special collection arrangements for the blood). In cases outside the United Kingdom, the examination results are requested. Suitable doses of calcium-sodium-lactate and ammonium-chloride (both given as tablets, the latter enteric-coated) are then used so as either to maintain or to adjust these levels. There are some clinical exceptions to a standardized dosage scheme, e.g. bone malignancy (where the serum calcium level is frequently very high, but where calcium dosage is nevertheless high); the presence of ascites or edema, where calcium is again given in high dosage with a view to diminution of capillary permeability; bronchial, pulmonary or gastric neoplasia, where ammonium-

chloride is not usually employed at all, and so on.

At these periodic blood examinations, a full blood count is also done. Additional tests, which are in current or investigational use at the moment, are also done, and one of these (the colloidal vanadate reaction) will be the subject of a communication elsewhere shortly.

*Local Treatment*

Whenever possible, local treatment of accessible lesions is also attempted, as a supplement to injection therapy. Ointment, pessaries and suppositories are used, containing active material. Lozenges, paints, and solutions for irrigation, are being investigated. There is evidence that the method has definite objective value in suitable cases. A very few cases, where injections have been refused, have been treated locally only, and some have shewn a response; the method alone is not however suggested as a generally useful procedure.

*Radium and Radiotherapy*

There is a risk of a severe general systemic reaction if patients are subjected to radium or deep x-ray therapy concurrently with H.11 injections, and the practice is therefore not to commence H.11 therapy until about 14 days after their termination. With this safeguard, there appears to be no risk.

*Synthetic Estrogenic Substances*

A number of cases have been treated with these concurrently with H.11 therapy. There is no incompatibility but the clinical results are no better and no worse than those obtained in similar cases with H.11 therapy alone. In this connection it should be noted that present biochemical information indicates that the active principle/s in the extract are unrelated to these substances.

*Clinical Results*

Tabulated reports of the results as a whole have been published from time to time (15, 17, 18, 19). They indicate that, excluding those patients who succumb or cease treatment after less than two months' treatment, and who are accordingly now recognized as having been treated for too short a time for any possible objective response, approximately two-thirds of the total have benefitted objectively. About one-third have shown definite tumor regression and many of these cases have progressed to full tumor-regression with clinical and other evidence of complete clearance of the disease and return to normal life. Another one-third of the cases have shown arrest of previously growing tumors for periods in excess of two months and in many cases for several years. These cases are regarded as partial successes.

It is noteworthy that a majority of them have shown subjective improvement concurrently with the period of arrest of growth, and this may perhaps be attributed to the cessation of "growing-pressure" on nerve endings surrounding tumours. The third group of about one-third are objective failures, in which tumours continue to grow unchecked.

It is a remarkable fact, however, that quite a high proportion of these failures have had relief of intractable (sometimes, morphine-resistant) pain. The etiology of this phenomenon clearly may involve a psychological basis in some cases, but the relief in many cases has been so pronounced and prolonged that this cannot be the sole explanation. The extract has no narcotic properties in the healthy subject.

In view of the advanced and "untreatable" nature of the cases so far treated with this method (an early case has never yet been accepted for treatment), the above results are regarded as indicating that the method is worthy of use in such cases, in that it can produce tumor-regression or arrest, and symptomatic improvement, where other

methods in more general use either cannot be used or, having been used, have failed. In no case so far recorded has there been any acceleration of rate of tumor-growth, and there does not appear, therefore, to be anything to be lost by employing the method.

Detailed reports of isolated cases or selected series of satisfactory cases have also been published (20, 21, 22, 23, 24). It has been found that, as a rule, a minimum of six months' treatment has been needed in fully satisfactory cases, and this period may require extension to two years or even more. Changes in dosage, and so forth, may become necessary during treatment, and as full co-operation as possible between clinician and laboratory is therefore sought. When a final and satisfactory result is achieved, and both clinical and laboratory evidence indicates that the disease has been completely eliminated, malignant tissue having been replaced by scar-tissue nodes, the injection doses are *slowly* decreased to zero over a period of 5-6 weeks. Subsequently, periodic follow-up examination is indicated.

*Case Histories*

The following brief case reports are included to indicate typical results in satisfactory cases.

I. Male, aged 54. Primary transitional-celled carcinoma of bladder, confirmed by biopsy, with cervical and lumbar spinal and liver metastases. First treated in February 1941 with diathermy to primary tumour following biopsy. Deep x-ray therapy (4,000r) applied in 2½ weeks to the bladder in April and May, 1941, with a good local response. Further radiotherapy in September and November 1941 to the spine only.

*January, 1942.* Commenced H.11 therapy. Weight under 98 lbs. Appetite and general condition very poor; severe pain from spinal metastases; bedridden; no other treatment considered possible. Liver markedly enlarged and tender, with palpable hard nodules. No ascites, but profound jaundice. Prognosis very poor.

*February, 1942.* Subjective improvement in appetite, pain (now almost nil) and general condition.

*March, 1942.* Weight 106½ lbs. No pain. Now able to walk in room. Liver edge still palpable, but no nodules now detected. Jaundice cleared.

*May, 1942.* Weight 114 lbs. Generalized improvement; walking out and working 3 hours daily. Liver smaller, much softer, no nodules or tenderness.

*June, 1942.* Commenced cessation of treatment.

*July, 1942.* Ceased treatment.

*August, 1942.* Cystoscopy: no primary recurrence. X-ray examination of spine: metastases stationary since examination immediately prior to H.11 therapy.

*October. 1942.* Symptom-free apart from some lumbar stiffness. Back at work full-time.

*January, 1943.* X-rays show spinal changes stationary and sound: Erythrocytes: 4,810,000 per cu.mm. Haemoglobin: 89 percent. Symptom-free.

*June, 1945.* Weight 142 lbs. Full work. General condition normal. Symptom-free. X-rays show spinal metastases to be now completely re-ossified.

*July, 1946.* Normal state of health Recent complete examination showed no primary recurrence, complete re-ossification of bone metastases, liver not palpable, and no physical signs apart from slight stiffness of the lumbar spine.

*December, 1947.* Similar condition in all respects. (This case now has a survival period of six years from commencement of H.11 therapy and from being given up as beyond other treatment. The diagnosis and progress of the case have been supervised by established authorities).

II. Female, aged 56. Primary papillary

cystadenocarcinoma of right ovary. In September 1944, complained of hypogastric swelling. A visible and palpable tumor was found extending from 1½ inches below the umbilicus down into the pelvis, hard and irregular. X-ray of the intestinal tract showed no obstruction of the bowel lumen, but suggested pressure from without. Operation was advised but refused by the patient. In March, 1945, she consented to operation. A large tumour of the right ovary was found, deeply embedded in the broad ligament. Partial excision only was possible, and biopsy gave the result indicated above. Three weeks radiotherapy was given post-operatively. In August, 1945, she again complained of pain, and an enlarging abdominal mass was found.

*September, 1945.* Commenced H.11 therapy. Weight 110 lbs, falling. Severe pain in the right iliac fossa. Some ascites. Large abdominal mass palpable. Prognosis under six months.

*November, 1945.* Weight 114 lbs. No pain for the last six weeks. Abdominal tumour now soft and "doughy".

*January, 1946.* Weight 115½ lbs. No pain. Up and able to do house-work. Abdomen feels swollen, but no mass now palpable.

*April, 1946.* Weight 119½ lbs. No symptoms. Abdomen now clinically normal.

*September, 1946.* Weigh 122 lbs. No symptoms. Leading a normal and energetic life. No abnormality detected in the abdomen.

*January, 1947.* General and local conditions normal. Commenced cessation of treatment.

*March, 1947.* Ceased treatment. Examined under anesthesia by the surgeon who performed the original operation. He reported: Abdomen: No palpable tumour. No ascites. Liver of normal size. Per vaginam: Nothing abnormal in pelvis. Stump of cervix freely mobile. No sign of any recurrence.

*November, 1947.* Alive. Normal in all respects.

*February, 1947.* Similar.

### *Prophylactic Use.*

It has been felt that this method could be used following surgical and other methods of treatment as a safeguard against recurrence of disease, and a restricted series of cases has been treated on these lines. It is not yet possible to quote satisfactory statistical results, but there is some evidence to indicate that treatment with H.11 extract for six to twelve months post-operatively can reduce the incidence of recurrence in those cases where the recurrence rate is short and well-established. Further investigations are proceeding.

### *Reactions.*

The great majority of patients show no unfavourable reactions of any sort throughout their treatment. Two types of reaction are however occasionally observed.

1. Focal Reaction. This occurs during the first three months of treatment in about 2 percent of cases. Edema in and around malignant lesions is formed, resulting in swelling of the tumours. It is a transient phenomenon, and can normally be limited by adequate doses of calcium. It has practical importance only in cases of alimentary tract tumours, where swelling might cause obstruction, but it is a fact that in no case so far recorded has obstruction actually occurred which could be attributed to this reaction. It is thought to explain those cases which finally respond well, but in which tumours have become appreciably larger during the early stages of treatment, without evidence of increased malignancy, but with increased pressure symptoms such as pain.

2. General Reaction. Malaise, nausea, sometimes vomiting, pyrexia, (oc-

casionally subnormal temperature) are symptoms of this phenomenon. It was found primarily in the group of cases treated with "reaction dosage" and mentioned above. With normal doses, however, it is not encountered. Massive doses in the malignant case can produce it, and therefore high dosage is not advisable.

### *Current Research.*

Research is being conducted in order to isolate the active principle/s and to determine their chemical and pharmacological properties. Encouraging progress is being made in this direction. Detailed investigation of the mode of action of the extract on the malignant cell is yielding further valuable results, and it is anticipated that tissue culture work will shortly give more information on this subject. Hematological and serological analyses of large numbers of patients treated with H.11 extract, together with parallel results in normal controls, will be published in due course. Research in this connection, particularly with reference to serum proteins, continues.

### *Acknowledgement.*

The author wishes to acknowledge the valuable assistance given in the compilation of this communication by Mr. J. H. Thompson (Director of Research); Dr. O. Peczenik; Dr. J. L. Williams; and other members of the staff who have supplied necessary data.

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## CANCER

*"The best cancer clinic in the world should be the office of the private physician. The life of the cancer patient is in the hands of the first physician he sees. The cancer problem today is early diagnosis."*
*—American Cancer Society*

# Pulmonary Infarction: A New Physical Sign*

*Importance of Pulmonary Infarction*

1. Pulmonary infarcts are found in 5 percent to 9 percent of all autopsies.
2. The occurrence of pulmonary infarcts is 60 percent in medical patients; 40 percent in surgical patients.
3. Pulmonary infarcts cause 6 percent of all surgical deaths.
4. Pulmonary infarcts are fatal in 37 percent of cases in which they occur.
5. Non-fatal infarction frequently leads to fatal complications.

*Predisposing factors*

| | |
|---|---|
| 1. Age | 8. Dehydration |
| 2. Obesity | 9. Vascular changes |
| 3. Trauma | 10. Cardiac failure |
| 4. Delivery | 11. Pulmonary congestion |
| 5. Operation | 12. Myocardial infarction |
| 6. Infection | 13. Auricular fibrillation |
| 7. Rest in bed | |

Blood clotting elements are increased post-operatively and after delivery. Thrombi form with stasis and with endothelial damage. Pulmonary congestion favors infarction from embolic thrombi.

*New Diagnostic Sign*

*Pulmonary infarctions are exquisitely tender on percussion.* The sign was positive in 97 percent of cases observed for it. Pneumonias and pleurisy occasionally show slight tenderness on percussion.

*Differential Diagnosis*

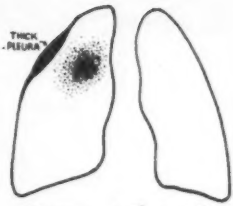
| | Infarction Percent | Pneumonia Percent |
|---|---|---|
| **HISTORY** | | |
| *Multiple attacks | 48 | 6 |
| Chest pain | 80 | 76 |
| Chill | 10 | 72 |
| Cough | 84 | 96 |
| Hemoptysis | 60 | 40 |
| *Dyspnea | 70 | 40 |
| **PHYSICAL FINDINGS** | | |
| *Acutely ill | 46 | 86 |
| Cyanosis | 22 | 20 |
| *Tender on percussion | 64 | 4 |
| Consolidation | 60 | 72 |
| Rales | 70 | 68 |
| Friction rub | 10 | 12 |
| *Bloody plueral fluid | 55 | 0 |
| *Response to sulphonamides | 2 | 68 |
| Temperature (at onset) | 101.5°F | 102.9°F |
| Pulse (at onset) | 113/min. | 118/min. |
| (at onset) | 30/min. | 29/min. |
| Respiration | | |
| **LABORATORY** | | |
| White blood count | 15,300/cu. mm. | 17,400 cu. mm. |
| *Pneumococci in sputum | 2 percent | 80 percent |
| Number of Cases | 50 | 25 |
| Mortality | 38 percent | 4 percent |

* From the exhibit of R. L. MacMillen et al of Bowman Gray School of Medicine, Wake Forest College and North Carolina Baptist Hospital, Winston-Salem, North Carolina, at American Medical Association meeting, Atlantic City, June 1947.

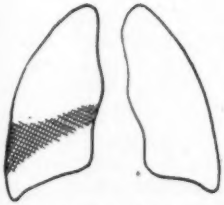
## PULMONARY INFARCTION

Classical Wedge

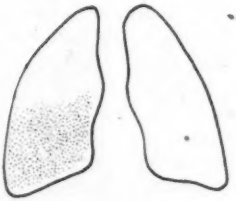
Massive Effusion



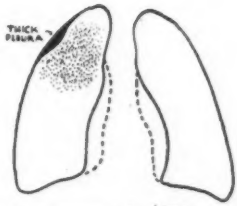

Pleural Reaction and Infarct



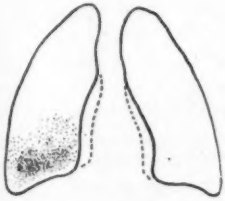
Multiple Infarcts with and without Pleural Reaction



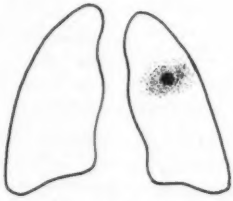
Hazy Non-specific Density (common)



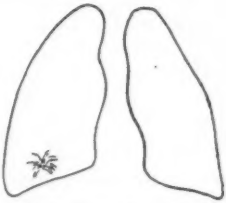

Pneumonitis+Pleural Reaction+Enlarged Heart=Suggestive of Infarct



Non-specific Infiltration+Enlarged Heart=Usually Pulmonary Infarct



Pulmonary Infarct complicated by Abscess



Stellate scar Typical Residual Fibrosis

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## AUTHORITY IN LEARNING

*There is no authority in learning. In science nothing can ever be considered settled because while the facts remain the same, the view-point is changing constantly.—Francis Bacon*

# Glutamic Acid: Discussion and Review

C. C. PFEIFFER, M.D.

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*University of Illinois College of Medicine, Chicago*

THE old wives' tale of fish protein (or phosphate) acting as brain food has never had a scientific basis in fact. Workers in fundamental science have definitely established that brain tissue has a respiratory quotient of 1.0 which has been interpreted to mean that most of the brain's energy is derived from glucose rather than protein. In brain tissue slice experiments three chemicals have been proven definitely to be metabolized by the brain. These are glucose, lactic acid and glutamic acid! Obviously other metabolites are utilized but in such small amounts that the rate of reaction is difficult to measure by our present methods. In this category, the phospholipid metabolism (exchange reactions) of the brain is extremely important but turnover is so slow that radioactive phosphate, if fed to the adult animal, appears only in trace amounts in the cerebral phospholipids.

In discussing increased cerebral function, one should differentiate sharply between stimulation resulting from unnatural stimulants such as cocaine, amphetamine, caffeine, desoxyephedrine, and strychnine and those compounds which occur in nature and might be used as a "food" rather than as a whip on a tired horse. The synthetic chemicals certainly stimulate the cerebral cortex, probably by accelerating the utilization of naturally occurring metabolites. However, the use of many of these stimulants is followed by a reactive depression which indicates clearly that either one or both of two phenomena have occurred: (1) a temporary exhaustion of some natural substrate, or (2) a cerebral exhaustion of an electro-chemical nature.

1—Glutamic acid, since it is a naturally occurring substance, may stimulate by providing more metabolic substrate on which naturally occurring stimulants (such as epinephrin and acetylcholine) can act. Krebs (1) in 1935 studied the metabolism of various amino acids by brain slices and found that l-glutamic acid was the only one utilized. Brain tissue contains an enzyme which synthesizes glutamine from l-glutamic acid and ammonia which decreases thereby the level of free ammonia in the brain slice. Price and his coworkers (2), working on the hypothesis that d-glutamic acid (which is not metabolized) would afford a convenient means for the production of ketosis, fed large doses of d-l glutamic acid to patients with petit mal and psychomotor types of epilepsy. They claimed beneficial effects in a small series of cases and noted a pronounced mental and physical alertness of the patients.

Spangler (3) studied a series of six petit mal epilepsies and confirmed in general the observations of Price. These findings, however, have not been definitely substantiated in a larger series of these epilepsies (4). In other words, the beneficial effect is not as great as that obtained with "tridione" therapy.

Zimmerman and Ross (5) noted that a diet rich in glutamic acid endowed rats with greater intelligence as tested by their ability to run through a maze. Albert and her associates (6) next reported on the effect of glutamic acid on 8 mental deficients ranging in age from

6 to 26 years whose I.Q.'s varied between 22 and 73. On an oral dose of 9.0 grams of glutamic acid per day their I. Q. rose a significant degree and regressed to the original level when placebo medication was substituted. Zimmerman et al. (7) extended their original observations on the rats to human beings. A group of 69 children (1½ to 17 years of age) with I. Q.'s ranging from below 30 to 131 were given 12 to 24 grams per day of glutamic acid for a period of six months. The rise in intelligence of some of the patients was dramatic. The average rise in I. Q. was 7 points and the average gain in mental age was 13 months. The most striking changes appeared in the seriously retarded group in which statistically significant differences were obtained between test and retest intelligence quotients. Greater improvement occurred on tests requiring abstract thought than on those involving motor skill. In many cases a greater degree of emotional stability resulted. The only untoward symptoms noted in this series was a slight degree of gastralgia in a few individuals. These workers postulate that the acceleration of mental ability is related to the formation of acetylcholine in the brain.

Since milk contains 5 to 6 grams of glutamic acid per quart, the medical world will await with interest similar experiments where milk is used as the source of glutamic acid. Whether glutamic acid can increase the mental ability of the normal or superior adult will probably remain a moot question until more accurate methods of assaying intelligence are available.

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## Simplified Intestinal Decompression Tube

A tube that is easy to introduce through the stomach into the intestinal tract may be made by taking soft rubber tube ten feet long, fastening a rubber condom to the end (see figure 1), and making a series of oval holes. The baloon tip is allowed to protrude 2½ inches beyond the end of the tube, 5 cc. of mercury is introduced through one of the holes into the condom, the air was forced out and the neck tied off with braided silk to prevent escape of mercury 1: 8. 11.

*Technic*: 1. Morphine sulfate gr. ⅙ and atropine sulphate gr. 1/150 are given ½ hour preceding intubation. 2. Apply local anesthetic to nostril (Examine both nostrils first with an otoscope, to determine which one is the more open.—Ed.). 3. Have the tube soaking in cold water, then apply lubricant. 4. Have the patient lie with head back on the pillow, insert the condom into the nose and let the mercury run into it, while feeding in the rest of the condom into the nose. Have the patient swallow water. The weight of the mercury will pull the tube down through the pharynx and esophagus 5. Have the patient lie on his right side with foot of bed elevated 12 inches, then in Fowler's position for two hours and finally on left side with backrest still up, for 2 hours. Following this, he can move about freely, sit up and let the feet dangle. 6. The tube is advanced slowly.—MEYER O. CANTOR, M.D., Grace Hospital, Detroit.

# Calcium Deficiency: Clinical Signs of Tetany

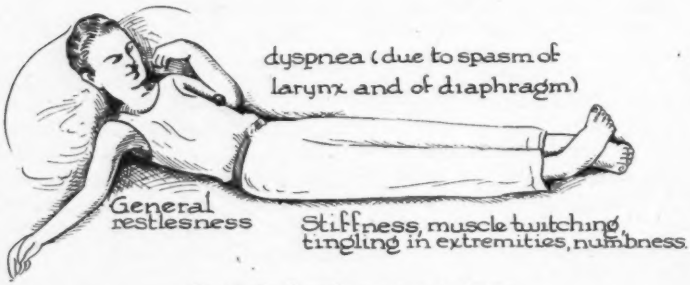


Fig. 1. Prodromal symptoms in tetany

*Prodromal symptoms:* (Fig. 1) "Numbness and peculiar sensations" throughout the body; general restlessness; "tightness in the throat" and difficult swallowing; stiffness, muscle twitching, numbness and tingling in the extremities; dyspnea due to spasms of the larynx and diaphragm—all are symptoms of increased neuromuscular irritability due to lowered blood calcium.

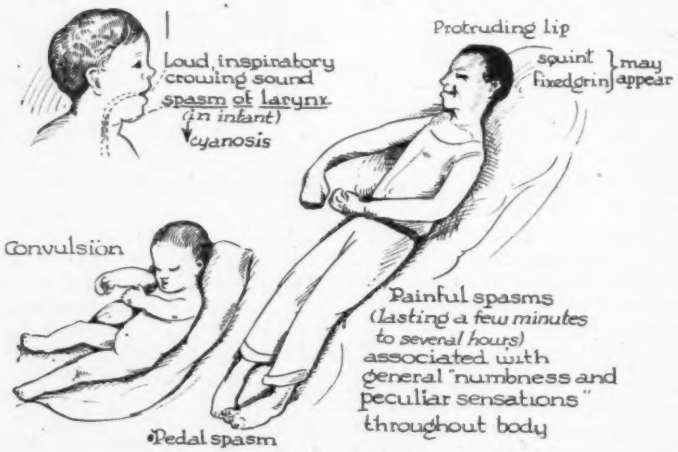


Fig. 2. Tetanic attack

*Tetanic attack:* (Fig. 2) Painful spasms, lasting a few minutes to several hours, of the hands and feet (carpal and pedal spasms); in the infant, convulsions may occur and spasm of the larynx may result in a loud, inspiratory crowing sound, followed by cyanosis. A fixed grin and squint may appear.

Fig. 3. Carpal spasm in tetany

Carpal spasm (Fig. 3) results in a flexion of the wrist, adduction of the thumb, fingers flexed at the metacarpophalangeal joints, palm of hand hollow, hand is wedge-shaped (obstetrician's hand). In severe cases the elbow is also flexed.

Pedal spasm (Fig. 4) presents a hollow sole, strongly flexed toes with big toe adducted and forced beneath second toe, and extension at hip and knee. Tetany occurring in both hands and feet: carpopedal spasm.

*Diagnosis:*

1. Trousseau's sign: A tourniquet applied around the upper arm for a few minutes causes carpal spasm. (Fig. 3)

2. Chvostek's sign: Tapping the facial nerve just in front of the external auditory meatus results in a contraction or twitching of the facial muscles on that side. (Fig. 5)

3. Pool-Schlesinger sign: If the thigh is flexed on the hip, with the knee extended, extensor spasm at the knee occurs and also painful tonic spasm (supination) at the ankle. (Fig. 6)

4. Erb's sign: Increased galvanic irritability is constantly found in tetany.

Stimulate the median nerve in adults (or peroneal nerve in children) with a current of known intensity.

Cathodal opening current causes muscle contraction, *in tetany, with less than 5 milliamperes.*

Anodal opening current is less than anodal closing current, *in tetany.*

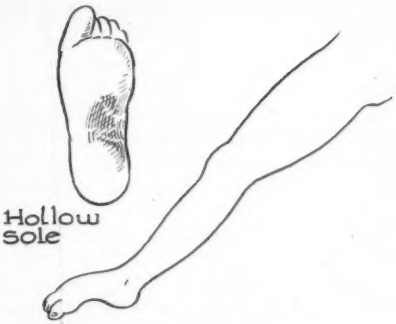


Fig. 4. Pectal spasm in tetany

Fig. 5. Chvostek's sign in tetany

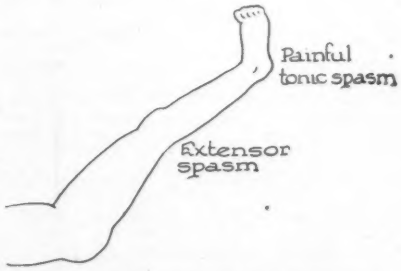


Fig. 6. Pool-Schlesinger sign in tetany

# Calcium Deficiency: Blood and Urine Findings

The normal calcium content of blood serum (*not* whole blood) is 8.5 to 11.5 mg. per 100 cc. During infancy and childhood, up to 12 years, the average values are in the upper limit of this range. Fetal blood serum at term contains 11 to 12 mg. per 100 cc., the maternal serum calcium being 8.5 to 9.5 mg.

The physiologically active portion of the serum calcium (the diffusible portion) varies from 4.5 to 5.5 mg. This can be figured by determining the total protein of the serum and using the chart printed below.

### *Urinary Calcium*

Lowered blood calcium level (hypocalcemia) is associated with a decrease in urinary excretion of calcium. As soon as the serum calcium falls below 6.5 to 8.5 mg., no more calcium can be found in the urine.

### *Simple Urine Test*

In control of hypocalcemia, the necessity for repeated blood analyses may be avoided by testing the urine with Sulkowith's reagent (2.5 Gm. oxalic acid, 2.5 Gm. ammonium oxalate, 5 cc. glacial acetic acid, dissolved in water up to a volume of 150 cc.) When equal volumes of this reagent and urine are mixed, any calcium present in the urine is precipitated. If no precipitate forms, the blood calcium level is probably between 5 and 7.5 mg. instead of the normal level of 9.5 to 11.0 *A fine white cloud indicates that a moderate amount of calcium is present in the urine and that the blood level is probably normal.* A heavy, "milky" precipitate indicates that a large amount of calcium is present and there is danger of hypercalcemia. (Grollman).

CONDITIONS COMMONLY ASSOCIATED WITH ALTERATION IN SERUM CALCIUM CONCENTRATION AND PARTITION

| Condition | Total Ca, mg. per 100 cc. | Diffusible Ca, mg. per 100 cc. | Nondiffusible Ca, mg. per 100 cc. | Phosphate, mg. per 100 cc. | Protein, Gm. per 100 cc. | *p*H |
|---|---|---|---|---|---|---|
| Normal | 8.5–11.5 | 4.5–6 | 4–5.5 | 3–4.5 | 6–8 | 7.3–7.5 |
| Tetany: | | | | | | |
| Parathyroid | Decrease | Decrease | Normal or decrease | Increase | Normal | Normal |
| Postoperative | Decrease | Decrease | Normal or decrease | Increase | Normal | Normal |
| Maternal | Decrease | Decrease | Normal or decrease | Normal or increase | Normal or decrease | Normal |
| Infantile | Decrease | Decrease | Normal | Decrease or normal | Normal | Normal |
| Osteomalacic | Decrease | Decrease | Normal | Normal or decrease | Normal | Normal |
| Gastric | Normal | Normal | Normal | Normal | Normal | Increase |
| Hyperventilation | Normal | Normal | Normal | Normal | Normal | Increase |
| Bicarbonate | Normal | Normal | Normal | Normal | Normal | Increase |
| Sprue | Decrease | Decrease | Normal | Normal | Normal | Normal |
| Celiac disease | Decrease | Decrease | Normal | Normal | Normal | Normal |
| Pregnancy | Decrease | Increase | Decrease | Normal | Normal or decrease | Normal or decrease |
| Hyperparathyroidism | Increase | Increase | Normal or increase | Decrease | Normal | Normal |
| Kala-azar | Decrease | Normal | Decrease | Normal | Decrease | Normal |
| Nephrosis | Decrease | Normal | Decrease | Normal | Decrease | Normal |

Fig. 7. Cantarow and Trumper "Clinical Biochemistry" (Saunders)

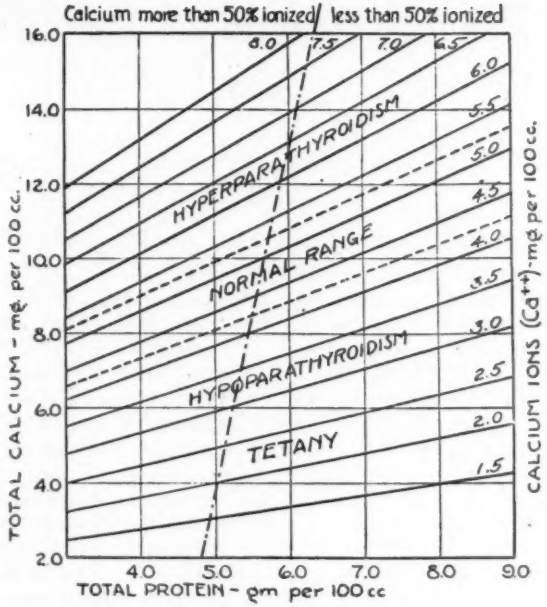


Fig. 8. A chart used for calculating the Ca++ concentration from the total protein and total calcium of the serum or plasma. The point of intersection of a vertical line representing total protein concentration with a horizontal line representing total calcium concentration will fall on or between diagonal lines representing the Ca++ concentration. (McLean and Hastings, Am. J. M. Sc., 189:601.)

# Calcium Deficiency: Therapy

The intravenous injection of calcium salts (gluconate, chloride) results in a prompt but transient rise in blood calcium, parathyroid hormone hypodermically in a slower but more prolonged rise and dihydrotachysterol (A.T. 10) orally in a still slower rise. The blood calcium curves following various types of therapy are shown in the figure, as taken from Grollman.

Calcium chloride 10 to 20 cc. 5% solution intravenously.

Calcium gluconate 10 to 20 cc. 10 cc. 10% solution intravenously.
(Repeated every 4 to 6 hours, if needed)

Parathyroid hormone 1 to 3 cc. (100 to 300 units) hypodermically causes elevation of calcium to normal levels for 8 to 18 hours.

Dihydrotachysterol is used in controlling chronic calcium deficiency (chronic hypoparathyroidism); 5 to 15 mg. daily until the blood calcium is above threshold level of 7.5 to 9.0 mg. and moderate amounts of calcium begin to appear in the urine. The Sulkowitch test (see urine test) can be used in controlling dosage.

# The Present Status of Pyridoxine (Vitamin $B_6$)

*By* C. D. MARPLE, M.D.
*New York, New York*

PYRIDOXINE, a derivative of pyridine, is, chemically, 2-methyl-3-hydroxy-4, 5 hydroxymethyl pyridine and is used in the form of the hydrochloride. The synthetic product possesses a potency comparable to that of the natural isolate. Its mechanism of function is unknown.

In rats, a pyridoxine-free diet has been reported to be followed by epileptiform seizures[1], dermatitis[2], and disturbances of the growth and reproductive mechanisms[3].

What is known of human requirements of pyridoxine is limited to the results of its use in clinical therapy, its applications being suggested by the findings in animal experiments. Weinstein et al[4] have reported complete or marked relief following the administration of intravenous injections of pyridoxine hydrochloride in cases of *nausea and vomiting of pregnancy;* experiments by Axelrod and associates[5] demonstrated that the essential amino acid tryptophane is not assimilated by the body in the absence of pyridoxine; and Wright, Samitz and Brown[6] believe the drug to be of value in the *treatment of eczematous or seborrheic lesions of the skin.*

There has recently been a heightened interest in the effect of pyridoxine and its deficiency on the reticulo-endothelial system. Reports indicate that the maintenance of lymphoid tissue may depend upon adequate amounts of pyridoxine in the diet[7], and establish the lymphocyte as a carrier of antibody protein[8].

Stoerk and Eisen[9] undertook an investigation of the effect of pyridoxine deficiency on circulating antibodies in rats immunized against washed sheep erythrocytes. No measurable agglutinins or hemolysins were found in six of the nine animals in the pyridoxine-deficient group and only extremely low titers in the other three of the group. The control groups had measurable antibody titers, with thirteen of the fifteen ranging comparatively high. The average thymic weight of the pyridoxine deficient rats was about one-eighth that of the full control group, and the number of lymphocytes found in the thymi and lymph nodes was greatly reduced, demonstrating a marked degree of lymphoid atrophy. Because this condition was well advanced by the time immunization was begun, it is impossible to conclude that suppression of serum antibodies is a consequence of the lymphoid atrophy; it is conceivable that both conditions occur independently in pyridoxine deficiency.

In either case, a possible analogy appears in an account by Cantor and Scott[10] of the *treatment of agranulocytosis* with intravenous injections of pyridoxine hydrochloride. It is now generally accepted that the lesions of agranulocytosis are due to the neutropenia, which permits bacterial invasion, and is the result of impaired function of the myelocytic elements of the bone marrow.

The evolution of polymorphonuclear cells is a process parallel to the production of lymphocytes in the lymphoid tissue; in view of the conclusion of Stoerk and Eisen, and of the immediate improvement apparently effected by ad-

ministration of pyridoxine in cases of agranulocytosis, it seems possible that future studies may reveal a similarity in the influence of pyridoxine on bone marrow and lymphoid tissue.


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## The Integration of the Teaching of the Basic Medical Sciences With the Hospital Services

One of the most effective means that I know for increasing basic science is to try at all times to avoid the use of the word report. Instead of "The report on Mrs. X's sputum is negative," "A carbolfuchsin stain on a smear of concentrated sputum failed to reveal any acid-fast organism; a guinea pig inoculated subcutaneously with 2.0 c.c. of the concentrate four weeks ago is still alive and healthy."

Instead of "Mrs. Y's urine was reported negative," "A catheterized centrifuged specimen of urine showed only a few epithelia cells. 5.0 c.c. inoculated into broth culture revealed no growth of organism in 24 hours."

Instead of "A tranfusion reaction for Mr. A was reported," "Thirty minutes after the intravenous injection of 500 c.c. of citrated whole blood drawn five days previously from a professional donor, the temperature rose from 99 degrees to 100.6 degrees and the patient experienced chilly sensations but did not shake, and two hours later the temperature was normal."

Instead of "The x-ray reported on Mr. B. showed cardiac enlargemennt," "A 6-foot teleroentgenogram showed the cardiac shadow to occupy more than one-half the internal diameter of the chest and to have a boot-shaped contour."

These examples could be multiplied almost indefinitely, but they have one feature in common and I want to stress this common denominator. They all imply what can be done with one's own hands. They all presuppose a knowledge of methods and a knowledge of the real values as well as the limitations of those methods. This is one important phase of basic science. — Russell L. Holman, M. D., New Orleans, La. From the Department of Pathology and Bacteriology, Louisiana State University School of Medicine, New Orleans, La.

# Editorials

## More Leisure for the G.P.

OFFICE personnel, shop workers, and almost all those who work for a living have succeeded to a great extent in securing for themselves an eight-hour working day. Even crews of ships have been demanding and getting a 40-hour week, a working condition most people would have considered impossible a decade ago. Almost everyone in the spirit of the times insists upon and gets time which he can call his own, when he can play, read, visit with his family or do whatever else he pleases to take him temporarily out of the grind of bread-winning. That is to say, almost everyone gets a period of leisure each day except the medical general practitioner.

Most specialists have their free evenings, even those with tremendously large practices that keep them working hard during the daylight hours. People rather generally know that they must go to see their dermatologist, their surgeon, or whoever during an office hour in the morning or afternoon if they are to see him at all, and they get there at the specified time. Only when it comes to the family doctor does the public consider that its convenience is paramount. Naturally they cannot be blamed for this if Dr. Jones is willing to sit in his office until near midnight every night so that it will be nice and cozy for Mr. and Mrs. Smith to drop in to see him professionally after they have been to the first show of the local movie.

Of course, there is no royal road toward changing the habits of the public and probably few neighborhood practitioners would dare to eliminate evening office hours if they had to do it alone. No doubt the effect on his practice would be, "Well, if he's going to be like that, we'll go to a more accommodating doctor." However, the neighborhood delicatessen did not dare close at 6 p.m. either until all the other stores in the vicinity agreed to join in the earlier closing. Now if Mrs. Brown knows that if she wants a loaf of bread she must send her Johnnie for it before 6 p.m. or she will not get it, and since she has become accustomed to the idea it is no longer a hardship.

What a renewed pleasure in life G. P.'s could get if they could get up from the dinner table and go to a movie like other people do, or to the theater or to a bridge party without keeping all the other guests waiting! How nice it would be to hold medical meetings at a decent hour so that at their close one could still get to bed long before midnight! In fact, how grand for the G. P. if he could make his life approximate that of his neighbors! Of course, he still would have his emergency calls in the early evening and in the small hours of the very early morning, but the usual freedom from work from say 6 p.m. onward might easily add years to his life. It is a practical ideal worth striving for.—F. C. S. in "Philadelphia Medicine."

## Tomorrow's Medical Practice

An alert practitioner can easily forcast the shape of medical practice when the class of 1947 meets for its tenth reunion. By that time prepayment medical care plans will have covered as much of the country as Blue Cross plans do today.

In the first place, the doctor will have accustomed himself to far more lay intervention in medical procedures than is today considered possible. For when the bill-paying function passes from the patient to the "company" the latter is going to enforce its rights to inspect records and to insist on advance authorization for expensive procedures. While there will be less of this under medical society plans than under commercial insurance, and less of it under the voluntary than under compulsory projects, it is naive to suppose that even medical societies will be able to administer such projects without lay officials. The question "Was this treatment necessary?" or "Was this procedure authorized?" will be asked by the keeper of the purse, and the doctor will answer — or he won't be paid. This may be an undignified position for the practitioner, but it is an inescapable one. Experience shows that health insurance cannot function on the honor system. So the general practitioner, 1957, must be prepared to justify his procedures to a nonprofessional auditor. Either that, or be willing to be on the outside looking in.

A secondary result of this will be the invasion of much of the traditional privacy of medical records. You can't expect the "corporation" to pay you for treating syphilis unless you reveal the name of the patient and the evidence for the diagnosis. Not even a medical-society-sponsored plan is going to pay a doctor for six injections unless his bill indicates what the injections were.

A third result will be increasing importance to medical society membership. Whether the societies themselves sponsor the plans or whether commercial corporations or governmental agencies sit in the driver's seat, the fact will be that membership in a county medical society will become the simplest way of establishing status as a "reputable physician." Note that even today most VA "home-town" contracts still make membership in the medical society the basic requirement for participation.

A fourth change, and probably a good one, will be in the direction of more meticulous record-keeping. The practitioner had better keep a copy of every report and bill he sends out, and of every certificate too. And there will be a plethora of "certificates" in the brave new medical world of tomorrow. And with the need of "supporting" his procedures, the doctor will have to have records which will stand inspection.

In all probability there will have to be some sort of standard nomenclature. How can the company keep statistical records (and in the world of tomorrow the statistician will be a top brass-hat) under the present catch-as-catch-can momenclature? Is one doctor's "traumatic encephalopathy" the same as another's "concussion Syndrome'? Will "hyperthyroidism' be tallied in the same column as "exophthalmic goiter?' The answer inevitably is a single, uniform medical terminology.

As health insurance programs wax, administration will become increasingly complex. At some middle echelon will sit an M.D. (not, we hope, a layman) to check diagnoses and authorize treatments. From his swivel chair, the medical administrator, sincerely trying to maintain top-notch professional standards, will become disturbed at the carelessness with which many physicians make diagnoses. "Chronic gastritis" will be anathema, and "sacroiliac strain" perhaps as obsolete as "the vapors." Then will come a directive — all diagnoses must be supported by objective evidence. The company will not pay for the treatment of epilepsy until an electroencephalogram confirms the diagnosis, and medication for nephritis can scarcely be authorized until the kidney function results have been filed. It will make for scientific accuracy, though it may be a bit hard on the practitioner who depends on his clinical hunches.

The doctor will grumble and gripe, but he will survive. Perhaps his clinical acumen will be sharpened by these more rigid standards. Or maybe not.—HENRY A. DAVIDSON, M.D., EDITOR, *Jour. of the Med. Soc. of N. J.*

# Problems in Practice

## Gelatin Foam in Cavities

*Question:* What substance may be used to fill cavities produced by the removal of large amounts of necrotic tissue or tumors?—M. D., Pasadena, California.

*Answer:* There are a number of new materials which are hemostatic, non-irritating, and will fill cavities suitably. Apparently, the least irritant is gelatin foam (Gelfoam-Upjohn) which has been used to fill large areas, such as the thoracic cavity after the removal of one lung.

O. T. Clagett of the Mayor Clinic reports that it absorbs 45 times its weight in blood or other fluids. Its cost is low. It is mild and neutral in the tissues. Penicillin, streptomycin, and thrombin are not inactivated by contact with it.

In both clinical and experimental use, it does not cause a reaction. The writer has used such packings in the cavities left after removal of pilonidal cysts and tumors. without harmful reaction. (*Proceedings of the Mayo Clinic*, Dec. 24, 1947, Volume 22, No. 26, Page 585)

## Bacitracin

*Question:* Is Bacitracin available for clinical use today? M. D., Newark, N. J.

*Answer:* At the present time we do not recommend the systemic use of Bacitracin. Current investigations are proceeding in this field, and we hope to have a product suitable for systemic use in the future.—CHARLES H. NAMMACK, M. D., Director 4th Medical Division (NYU)

(Editor's note: Bacitracin is an antibiotic substance isolated from cultures of bacteria of the Bacillus subtilis group which are said to be effective against gram positive bacteria, such as pneumococci, hemolytic streptococci, gonococci and meningococci. (Dorman).

## Trench Mouth

*Question:* What treatment should be used for Vincent's Angina or Trench Mouth?

*Answer:* Vincent's Angina or Trench Mouth responds to the local use of penicillin or to the intramuscular injection.

The Council on Dental Therapeutics recently has suggested that penicillin is more effective than sulfathiazole in the treatment of Vincent's infection.

Penicillin logenzes containing 1000 units give a pronounced relief within 24 hours.

This work was carried out by Dr. I. Glickman of the Tulsa College Dental School, Boston, Mass., and reported in the Journal of the American Dental Association, Mar. 15, 1947.

## Pyridoxine (Vitamin $B_6$) Therapy

*Question:* Is pyridoxine of proven value in the human being? Obstetrician, New Orleans, La.

*Answer:* Pryidoxine is being used in the treatment of nausea and vomiting of pregnancy, of eczema, of agranulocytosis and of other conditions in which the bodies resistance to infection is lowered. A summary of the literature by an assistant editor of *Clinical Medicine* will be found in this issue.

## Year-Round Asthma

*Question:* What may be the cause of asthma which occurs the year around and is not related to the hay fever season? The patient at times will sneeze, his nose will run, and he will have an attack of asthma which is very similar, to that occuring during the hay fever season.

*Answer:* Moulds will produce respirary allergy without any seasonal incidence. A pharmaceutical house will supply you with skin tests to test for moulds, and especially for ultinaria.

## Diptheria Carriers

*Question:* Is penicillin of any value in clearing up diphtheria carriers who have positive throat cultures?—M. D., Richmond, Virginia.

*Answer:* The intramuscular injection and the nose and throat spray of penicillin are auxiliaries to the use of diphtheria anti-toxin. They do not supplant its use in acute diphtheria. Recent investigations have shown that spraying the nose and throat with the penicillin diphtheria solution and sucking logenzes of penicillin will markedly decrease the number of diphtheria carriers.

## Treatment of Leprosy

*Question:* What is the modern treatment of leprosy?—Dr. F. S. G. Penner, Crestview, Fla.

*Answer:* The treatment of leprosy has been markedly changed by the intravenous injection of one of the sulfonamides. The experience at the Leprosarium at Carville, La. under supervision of the U. S. Public Health Service is now quite extensive.

I am writing to them asking them to send you full information as the technic of treatment, results to be expected, and complications incurred. The outlook is much more hopeful since this treatment has appeared.

## When to Operate Upon the Jaundiced Patient

*Question:* How may one differentiate absolutely between "surgical" and "medical" jaundice? Is the old rule that all obstructive jaundice persisting more than 6 weeks should be explored for gallstone or other obstruction, still true?—M.D., North Carolina.

*Answer:* If the jaundice is truly obstructive, 6 to 8 weeks duration may be an indication for surgical therapy. The patient with a common duct obstruction should not be allowed to go on indefinitely without specific therapy. Recently, when making rounds with one of the country's leading exponents of making a diagnosis of liver diseases by many functional tests, this same problem occurred despite the battery of tests.

The same conclusion was reached by Frederick Steigmann and Hans Popper of Cook County Hospital, Chicago (see *Review of Gastroenterology*, May, 1948).

## Enterogastrone for Peptic Ulcer

*Question:* Where may I obtain enterogastrone for treatment of duodenal ulcer? —M.D., Dayton, Ohio.

*Answer:* Enterogastrone has been produced by Armour and Company of Chisago and by Eli Lilly and Company of Indianapoils. It, like all other remedies for peptic ulcer, will not change the personality of the patient or his gastric overresponse to life's crises. In this field, the x-ray has done harm because it focuses attention on the patient's stomach instead of on the patient. The much maligned old family doctor treated but the patient and was not distracted by changes in gastric acidity and contour. He cured the patient and the ulcer healed by itself.

This may seem to be a rather ill tempered answer, however local remedies may be needed to control acute symptoms but should not control the physician's desire to help the patient as well.


## Errors in X-Ray Diagnosis of Pulmonary Disease

The etiology and nature of pulmonary lesions cannot be determined with certainty from the configuration and distribution of abnormal shadows on the X-ray plate. The importance of correlating information from several methods of study in establishing a clinical diagnosis is exemplified in cases of atypical primary pneumonia (virus pneumonia) in which atelectasis of the upper lobe resulting from obstruction of the branch bronchus by thick exudate simulate the radiologic appearance of tuberculosis. Nor is it possible, from the X-ray alone, to determine whether a lesion is acute or chronic, or fibrotic, exudative, productive or excavating.—M. H. DUXBURY, *Amer. Practitioner*, 1, 5, 273-5, January 1947.

## Periobrital Edema and Thyroid Deficiency

Periorbital edema in a woman of menopausal age is often indicative of thyroid deficiency, a condition which responds rapidly to appropriate treatment. —*Medical World*, (Eng.) November 1, 1946.

## Increasing Dysmenorrhea

Increasing dysmenorrhea may be due to endometriosis. Endometriosis should enter into the differential diagnosis of abdominal pain as soon as menstruation has been established.—JOHN FALLON, M.D., *J.A.M.A.*, Aug. 24, 1946.

## Impotence

An erection is usually brought about by stimulation of the mind . . . Arousement may occur at times when the male is not conscious of any sexual stimulus. Men often note that the penis is erect in the morning when they arise. Usually this type of erection disappears after the bladder is emptied. Many patients who believe themselves impotent have reported that they have morning erections. If so, they are not sexually weak. The penis may also become erect during sleep, due to a pleasant dream which stimulates the sexual areas of the mind. If a man has erections in his sleep, he is not impotent but he may not be able to execute the sexual act until he has been told how to correct his difficulty . . . Supposed impotence is often due to psychic causes, notably worry about masturbation, "wet dreams," supposed small size of penis or because of earlier teaching that sexual activity was shameful.—EDWIN W. HIRSCH, M.D. in "Sex Power" (Medical Arts Bldg., Chicago), published by Research Publications of Chicago, 1947.

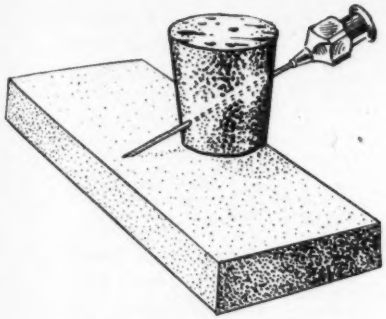
## Ectopic Pregnancy

*Lower abdominal pain is the* outstanding symptom and a *palpable mass outside the uterus* is the outstanding sign in ectopic pregnancy. Leukocytosis and an increased sedimentation rate may be found.

*Dark chocolate colored, vaginal bleeding* is diagnostic. Amenorrhea or menstrual irregularity is common. Fainting or syncope occurs during bleeding episodes.

Puncture of the cul-de-sac (posterior colpotomy) may introduce infection.—K. T. MACFARLANE, M.D., in *Am. J. Ob. & Gyn.*, March, 1946.

# THUMBNAIL THERAPEUTICS



## Sharpening Hypodermic Needles

Hypodermic needles when blunt reduce the facility with which they may be inserted into the tissue and cause pain during insertion. Where they are used frequently and consequently the cutting edge is rapidly blunted some means of sharpening is absolutely essential. Special apparatus may be obtained for this purpose but the use of a cork as a holder and a lubricated abrasive stone will afford an excellent substitute. A wire of the same gauge as internal bore of the needle is used to clean the lumen and a fine root canal reamer may then be used to eliminate any burred edge.—*Australian Dental Journal.*

## Episiotomy

An episiotomy should be performed so that the baby can be delivered at the side of the rectum rather than through it. If extension is necessary, the usual medio-laterial incision can be continued around the anus toward the mid-line below.

Evacuation of the uterine content, whether by curette or finger, should be proceeded by the injection of one cc. of pituitary extract hypodermically to protect against perforation and limit blood loss.

If it is urgent that the uterus be emptied promptly during the fifth and sixth months of pregnancy, vaginal hysterectomy is indicated, especially if the cervix is rigid.

Incomplete separation of the placenta is usually due to too early and too energetic attempts at its expression. If the uterus does not contract firmly after expulsion of the placenta or is contracted only by constant kneading of the uterus, the cause is either atony or retained remnants of placenta. Examine the placenta for missing portions.

## Skin Problems of the Aged (Geriatrics)

*Senile Ectases:* These are bright red or purplish angioma-like lesions occurring on the trunk and upper part of the chest. They are hemp seed-sized, slightly elevated ectases or varices. The lesions are composed of tufts of dilated capillaries and usually occur past middle age. *Treatment* is indicated for cosmetic purposes only. They are readily removed by electrolysis or with carbon dioxide refrigeration.

*Senile Atrophy:* The skin assumes a dull yellowish or grayish hue and is seamed with furrows and wrinkles, is dry and inelastic and may be slightly scaly, and loss of subcutaneous fat causes the skin to hang in folds or to be readily lifted from subcutaneous structures. *Treatment:* Senile atrophy may be postponed by improving the nutrition of the skin through massage, electricity, oil inunctions, bran or salt baths; cod


## Internal Medicine in General Practice

*By R. P. McCombs, M.D., Assistant Professor of Medicine, Tufts College Medical School.—W. B. Saunders. 1947. $8.00.*

This is still the handiest book to use in making a differential diagnosis or in reviewing topics in its field. The author's tables and diagrams simplify complicated subjects. He does not yield to the tendency to self-glorification so common to those who write, and wish to show their memory or astuteness.

## Advances in Internal Medicine: Vol. II

*Edited by William Dock, M.D., Long Island College of Medicine, Brooklyn, N. Y., I. Snapper, M.D., Mount Sinai ospital, N. Y.—Interscience. 1947. $9.50.*

A number of internists summarize their conception of present day medicine. It contains the best explanation in print as to heart *function*, and the basis for discarding the old "back-pressure" theory of cardiac decompensation, through venous catheterization studies of circulatory failure. Also presented are discussions related to the ventricular complex of the electro-cardiogram; angiography; surgical treatment of hypertension; tumors and chronic inflammation of the lungs; insecticides; aviation and deep sea diving medicine; penicillin therapy; Rh antigen; pernicious anemia; nutritional requirements in disease and nutritional disease in the Orient. Snapper repeats that arteriosclerosis, coronary thrombosis and gangrene are rarities in the Orient, probably due to low cholesterol diet.

## Heparin

In the Treatment of Thrombosis

*By Erik Jorpes, M.D., Reader in Biochemistry, Caroline Institute, Stockholm, Sweden.—Oxford. 1946. $6.50.*

A student of heparin discusses its chemisty, its effect on body physiology and its uses in medicine and surgery. Because of the high fatality rate associated with thromboembolic disease, every physician who deals with patients confined to bed or exposed to procedures that result in thrombophlebitis (medical, surgical and obstetrical) must know of methods to avoid and to treat such a complication.

## Medicine for Moderns

*By Frank G. Slaughter, M.D.—Julian Messner, Inc. 1947. $3.50.*

A very accurate story of psychosomatic medicine published for the layman, it is so well written that the physician might well read it. The person who is prone to have accidents repeatedly, the body upsets due to emotional causes, the inter-relationship between endocrines and emotion and psychic changes—all are truly and clearly presented.

## The Psycho-Analytical Approach to Juvenile Delinquency

*By Kate Friedlander, M.D., etc., Hon. Psychiatrist, Institute for Scientific Treatment of Delinquency—International Universities Press. 1947. $5.00.*

The author well says, "Delinquency is a disease of society, just as cancer, for instance, is a disease of the individual." The author well illustrates her methods with case histories, appropriate theories and suggestions as to treatment. As she states, psychoanalysis is only one of the factors that may need to be invoked.

## Recent Advances in Medicine

*By G. E. Beaumont, D.M., Physician to Middlesex Hospital, and E. C. Dodds, M.D., Professor of Biochemistry, University of London Blakiston Co. 1947. $6.00.*

One of the most interesting surveys of progress in the fields of internal medicine, endocrinology, examination of the blood and urine, cardiovascular diseases and therapeutics including newer agents in chemotherapy and antibiotic therapy.

## History of Medicine

*By Cecilia C. Mettler, A.B., Ph.D., Late Assistant Professor of Medical History, University of Georgia School of Medicine; Edited by Fred A. Mettler, M.D., Ph.D., Associate Professor of Anatomy, Columbia University College of Physicians and Surgeons, N.Y.C.—Blakiston. 1947. $8.50.*

Man always looks two ways, back towards his ancestors and forward to his posterity. Of the making of histories there is no end, but this is no ordinary history. Each subject covered in the medical curriculum is treated separately so that one can see at a glance, the progress in surgery, in obstetrics, in medicine, in anatomy and physiology and so on.

The author covered many thousands of references but without making the book a dull, dead mass of annotations. The book is that rare compendium that combines knowledge with interest. The medical student or the practicing physician alike may read with profit and interest the labors of those upon whom he stands.

## Handbook on Fractures

*By Duncan Eve, Jr. M.D., Surgeon-in-Chief, Nashville, Chattanooga and St. Louis Railroad. Mosby. 1947. $5.00.*

A straightforward account of the common fractures and methods that are effective in their management. The padding so commonly encountered in orthopedic texts is conspicuously missing.

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9. Effervescent antipyretic, analgesic—*Acetyl-Vess*
10. Detection of urine-sugar (no heating reagent tablet)—*Clinitest*
11. Induced bile secretion—*Decholin*
12. Gondotrophin (chorionic) therapy—*A. P. L. Sol*
13. Double defence in simple diarrheas—*Tomectin*
15. Non narcotic antitussive for cough control—*Diatussin*
16. Respiratory stimulant—*Lobelin*
17. Oral Therapy for psoriasis—*Sas-par*
18. Diuretic, coronary vasodilator — *Thesodate*
19. Adjuvant in bronchial asthma — *Ether-in-oil*
20. Hematinic for secondary anemia—*Copral (Improved)*
22. Thyroid disorders (Iodine therapy)—*Burnham Sol. Iodine*
24. Precise oral and parenteral digitalization—*Dioxin*
25. Insulin therapy — *Globulin Insulin with Zinc*
26. Effective parasiticide—*Benzyl Benzoate*
28. Anisyphilitic, arsenical and bismuth therapy.—*Thiopentarson*
30. Oral androgin for hormone therapy—*Metandren*
31. Oral progestogen—*Lutocylol*
32. Long lasting relief in nasal congestion (vasoconstricter)—*Privine*
34. Post-operative insomnia—*Pasadyne*
36. Treatment of otitis media—*Otozmosan*
38. Chronic prostatitis—*Colmetanese*
40. Appetite stimulant—*Fellow's Comp. Syrup*
41. Chronic salpingitis—*Jacobson's Sol.*
42. Whooping cough—*Bromaurate Elixir*
43. Aid in arthritis by anti-cholinestrerase activity—*Phyatromine*
44. Bursitis, fibrositis, arthritis (neuromuscular antispasmodic)—*Phyatromine*
47. Modern Diuretic therapy—*Mercuhydrin.*
51. Contraceptive jelly & diaphrams——*Lanteen*
52. High vitamin therapy—*Vi-Teens*
54. Analgesic for muscular aches and pains—*Baume Bengue*
55. Antipruritic—*Calmitol*
57. Salicylate therapy in common colds —*Alysine Elixir*
58. Alkaline antiseptic for throat inflammations—*Cepacol*
59. Coronary vasodilator—*Nitranitol*
61. Analgesic and decongestive for bronchitis—*Numotizine*
63. Chronic Arthritis (steroid complex) —*Ertron*
65. Gentle, prolonged sedation — *Peacock's Bromides*
67. Bitter tonic—*Gray's Compound*
68. Mineral therapy—$C_2$ *Minnrell*
69. Dysmenorrhea (corpul luteum therapy)—*Pranone*
70. Male gonadal replacement therapy—*Oreton*
71. Urinary tract infections—*Sulamyd*
72. Local treatment for psoriasis—*Riasol*
73. Dysmenorrhea (oxytoxic)—*Ergoaplol*
78. Dry, oral vitamin C—*Sodascorbate*
79. Dependable thyroid medication—*Thyrobrom*
80. Otologic infections—*Otomide*
81. Salivary analgesia for sore throat and tonsillitis—*Aspergum*
82. Better tolerance response in anemia therapy—*Mol-Iron*
83. Hypochromic anemia—*Hemosules*
86. Treatment of peptic ulcer—*Phosphaljel*
87. Control of diarrhea—*Kaomagma*
90. Chronic coughs and whooping cough —*Auri-Tussin*
92. Used medical book list.

CLINICAL MEDICINE—Free Literature Dept. (6-48)
Waukegan, Illinois

Gentlemen: Please forward my request for the literature encircled below, by number:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 7 | 9 | 10 | 11 | 12 | 13 | 15 | 16 | 17 |
| 18 | 19 | 20 | 22 | 24 | 25 | 26 | 28 | 30 | 31 | 32 | 34 | 36 |
| 38 | 40 | 41 | 42 | 43 | 44 | 46 | 47 | 48 | 51 | 52 | 54 | 55 |
| 57 | 58 | 59 | 61 | 63 | 65 | 67 | 68 | 69 | 70 | 71 | 72 | 73 |
| 78 | 79 | 80 | 81 | 82 | 83 | 86 | 87 | 89 | 90 | 92 | | |

Name .....

Address .....

Please check: ☐ Physician ☐ Intern ☐ Student ☐ Nurse
☐ I am a subscriber ☐ I am not a subscriber

**USE THIS COUPON!**

*Watch for changes and additions each month*


## AAPS Announces 1948 National Essay Contest

In collaboration with State and County medical societies, the Association of American Physicians and Surgeons is conducting its second annual national essay contest for junior and senior high school students, both public and parochial, on the subject, "Why the Private Practice of Medicine Furnishes This Country with the Finest Medical Care."

The three prize-winning essays from each county society will compete for state awards and the best three from each state will then be submitted to AAPS for entry in the national contest. Six national prizes will be awarded: first, $1,000; second, $500; third, $100, fourth, fifth, and sixth, $25.00 each.

## Present Status of BCG in Tuberculosis

BCG (Bacillus - Calmette - Guerin) has been used extensively in the Scandinavian countries and is being studied at present in the United States. Controversy over the use and the manner of use of the vaccine had led to an editorial by the Tuberculosis Control Divsion of the U.S. Public Health Service (Publ. *Health Reports*, XLI, 801-2, June 1946) which concluded that "careful review of the voluminous literature on the subject since 1920 fails to reveal irrefutable evidence of the vaccine's effectiveness."

BCG is prepared by the attenuation of bovine tubercle bacilli by special cultural procedures. Those who support its use claim that when it is introduced into tuberculin-negative infants and children, the attenuated organisms start a self limited infectious process which rapidly produces a variable degree of resistance against virulent strains of both bovine and human tuberculosis.

Opponents to BCG claim that there is danger of initiating infection, even though benign, by the procedure, that the induced infection does not provide satisfactory immunity and that, in regards clinical tuberculosis, those who have been infected early in life are those who die later in life. Patients who inquire about BCG should be told that while it is under intensive study at the present time, the vaccine is never administered to reactors to tuberculin and that, while BCG may increase resistance to tuberculosis, it is *not* a cure for the disease. Chadwick and Pope (The Modern Attack on Tuberculosis, Commonealth Fund, N.Y., 1946) suggest that it is unlikely that immunization of the general public is a practical procedure, but that, in groups exposed to special risk (e g. student nurses) or groups with particular susceptibilities (e.g., American Indians), vaccination may be an effective means of controlling the morbidity and mortality of the disease.—*California's Health*, Calif. Dept. Publ. Health, 4, 19, 155, April 15, 1947.

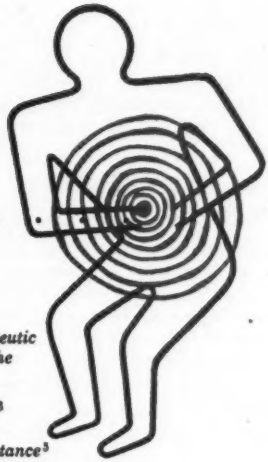
## Benzedrine Inhaler Addiction

The use of benzedrine tablets by mouth is now being forbidden in many states and cities, but addicts can easily obtain benzedrine or amphetamine by purchasing one of the amphetamine inhalers and taking out the paper impregnated with the drug. This is dissolved in water or alcohol and thus the stimulating effects are obtained. This is an increasing problem in both public and military practice.

The inmates taking the drug reported that it made the time go faster, made them feel happy, and made them talkative. Acute abdominal symptoms are fre-

*(Continued on page 16)*

*in the management of simple diarrheas*



# "TOMECTIN"

**"TOMECTIN"** *is a combination of nickel pectinate and dried fresh tomato pulp, two therapeutic agents which have been found of value in the management of diarrheas of non-specific origin.*

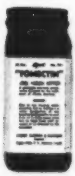
*The detoxifying[1, 2] and bacteriostatic[3] properties of nickel pectinate as well as its antihemorrhagic effect[4] have proved of clinical assistance[5] in the treatment of various diarrheal conditions including bacillary dysentery. Morrison reports[6] that with dried tomato pulp, diarrhea from simple or non-organic cause was usually arrested within 24 hours following treatment. Nickel pectinate and dried tomato pulp have been found, in many instances, to bring about a favorable response when other antidiarrheal medication had failed.[5, 6]*

*"Tomectin" will appeal to infants, children and adults because, ispersed in water, it forms a preparation having the refreshing tartness of tomato juice. From the standpoint of therapeutic effectiveness, simplicity of administration and palatability, "Tomectin" will prove a valuable antidiarrheal medication.*

*"Tomectin," No. 951, is presented in wide-mouthed bottles each containing 50 grams. Each gram contains:*

| | |
|---|---|
| *Nickel pectinate* | *150.0 mg.* |
| *Sodium chloride* | *50.0 mg.* |
| *Together with all factors naturally present in dried fresh tomato pulp* | *800.0 mg.* |


[1] Malyoth, G.: Klin. Wchnschr. *13*:51, 1934.
[2] Bittner, J. E., Jr.: Northwest Med. *35*:445 (Dec.) 1936.
[3] Myers, P. B., and Rouse, A. H.: Am. J. Digest. Dis. *7*:39 (Jan.) 1940.
[4] Powers, J. L.: Bull. National Formulary Committee *9*:5 (Oct.) 1940.
[5] Block, L. H., Tarnowski, A., and Green, B. L.: Am. J. Digest. Dis. *6*:96 (Apr.) 1939.
[6] Morrison, L. M.: Am. J. Digest. Dis. *13*:196 (June) 1948.


**"TOMECTIN"**
*Nickel Pectinate Compound*

Ayerst

*Ayerst, McKenna & Harrison Limited*
*22 East 40th Street, New York 16, N. Y.*

## MEDICAL NEWS

*(Continued from page 16)*

quently incurred in those taking the drug.

Injections of ascorbic acid may be a successful means of treating acute amphetamine intoxication.—R. R. MONROE and H. J. Drell in *J.A.M.A.*, Dec. 6, 1947.

### Sickness Statement for Rail Workers

Physicians throughout the nation are being asked to furnish medical evidence to substantiate the claims of railroad workers who may now draw cash sickness benefits under the Railroad Unemployment Insurance Act.

The Railroad Retirement Board pointed out that unless an application is mailed not later than the 7th day after the first day of sickness claimed it may not be received within the legal time limit for filing application. As a result, the employee may lose one or more days benefits. Doctors are asked to return each sickness statement to the patient or mail it promptly to the Board to which it is addressed.

### Carbon-Monoxide Poisoning

It was believed that the body could continuously oxidize carbon-monoxide to form carbon-dioxide. Studies with radioactive carbon-dioxide proves that the body does not oxidize carbon-monoxide. The disappearance rate of carbon-monoxide in the liver, indicates that it absorbs a large fraction of carbon-monoxide from the circulating blood when it releases it to the blood stream.

From the clinical standpoint, these results throw doubt on the reliability of using carbon-monoxide for blood volume determinations. — JOHN H. LAWRENCE, M.D. (University of California, San Francisco) in *The Doctors Talk It Over*, Lederle Laboratories, Feb. 17, 1947.

### Reforming Criminals

Outstanding results in the reform of criminals with facial defects, by corrective plastic surgery, have been carried out at the Stateville, Illinois, Peniten-

*(Continued on page 18)*

# Release!

## from fear of conception when pregnancy is contraindicated.

Whenever pregnancy is contraindicated, maximal protection is assured by the new Lanteen technique. This NEW TECHNIQUE gives dual protection—the mechanical protection of the Lanteen Flat Spring Diaphragm plus the spermatocidal activity of Lanteen Jelly.

**LANTEEN FLAT SPRING DIAPHRAGM**

*Easily fitted and long lasting.* The Lanteen Flat Spring Diaphragm, collapsible in one plane only, is easily placed without the aid of an inserter. Fitting the largest comfortable size assures maximal protection.

Lanteen Diaphragms, made of the finest rubber, are guaranteed against defects for a period of one year.

**LANTEEN JELLY**

Lanteen Jelly, nonirritating, nontoxic, soothing and rapidly destructive to spermatozoa, combines active spermatocidal agents in a jelly readily miscible with the vaginal secretions.

Physician's package and complete description of the *New Technique* will be sent upon request.

Ethically promoted—Advertised only to the medical profession.


**Lanteen**

Lanteen Medical Laboratories, Inc. • 900 North Franklin Street • Chicago 10, Illinois

## MEDICAL NEWS

*(Continued from page 14)*

tiary. There is a very low rate of parole violations in these men and there has been a transformation of personality and character. The project was begun 10 years ago at the request of prison physicians who said that defects were setting prisoners apart from others in appearance, usefulness, and social contact.

### Procaine Penicillin

Wyeth Inc. of Philadelphia, Pa. have announced a new aqueous Penicillin called Wycillin. The new product is a procaine penicillin which when suspended in sterile distilled water, and injected with practically no pain, into the muscles of a patient, will maintain effective blood levels for 24 hours. It can be carried around safely in a physician's pocket, and in aqueous solution retains its potency for as much as seven days without refrigeration.

E. R. Squibb and Sons of New York, N. Y., also announce a Penicillin Procaine for aqueous injection called Crysticillin, Both products claim similar advantages as mentioned above plus the fact that needles and syringes need not be dry and that blocking is minimized.

Premo Pharmaceutical Labs. of New York, N. Y. have available a Crystalline Procaine Penicillin in Sesame Oil which is claimed to be free flowing and is dispensed in popular disposable lcc syringes. Refrigeration, they claim is not required.

### Anti-Rh Serum

The development of Dr. Philip Levine of a highly accurate diagnostic anti-Rh (anti-D) serum derived from human blood has been announced by the Ortho Pharmaceutical Corp. The serum, for determining whether an individual has Rh negative or positive blood, is now available for use by hospital and clinical laboratories to prevent intragroup transfusion accidents and for the selection of Rh negative blood for the affected infants of Rh negative mothers.

*This country has 32,000,000 fathers. The average dad is forty-four years old.*

---


"An excellent simple presumptive test for routine use in the diagnosis of diabetes."[1]

# CLINITEST

## THE TABLET *NO-HEATING* METHOD FOR DETECTION OF URINE-SUGAR

**SIMPLE TECHNIC**—"My experience with Clinitest has convinced me beyond a shadow of a doubt that they are *the simplest* from the technical standpoint . . ."[2]

**SELF-GENERATING HEAT**—"The reagent tablet, known as the Clinitest Urine Sugar Tablet . . . generates heat when dissolved and the use of externally applied heat is not required . . ."[1]

Clinitest—simple, speedy, compact, convenient—is distributed through regular drug and medical supply channels.

1. Kasper, J. A. and Jeffrey, I. A.: A Simplified Benedict Test for Glycosuria, Amer. J. Clin. Pathology, *14*:117-21 (Nov.) 1944.

2. Haid, W. H.: The Use of Screening Tests in the Clinical Laboratory, J. Amer. Med. Tech., *8*:606-14 (Sept.) 1947.

***Identification cards for the protection of your diabetic patients now available free upon request.***

**AMES COMPANY, INC.**
ELKHART, INDIANA


*Despite the scarcity and high prices of whiskey, a nickel drink of it is still available in the South—a recent autopsy shows.*

### DO TELL

Patient: "My wife tells me that almost every night she dreams she is married to a millionaire."

Doctor: "You're darn lucky. Mine thinks that in the daytime."

### QUICK CURE

"I prescribe absolute quiet for your husband," said the doctor. "Here's a sleeping powder."

"When do I give it to him?" asked the wife.

"You don't give it to him," said the doc. "You take it yourself."

### MUST BE '48

The townsman was buying a fountain pen for his son's graduation gift.

"It's to be a surprise, I suppose," said the clerk.

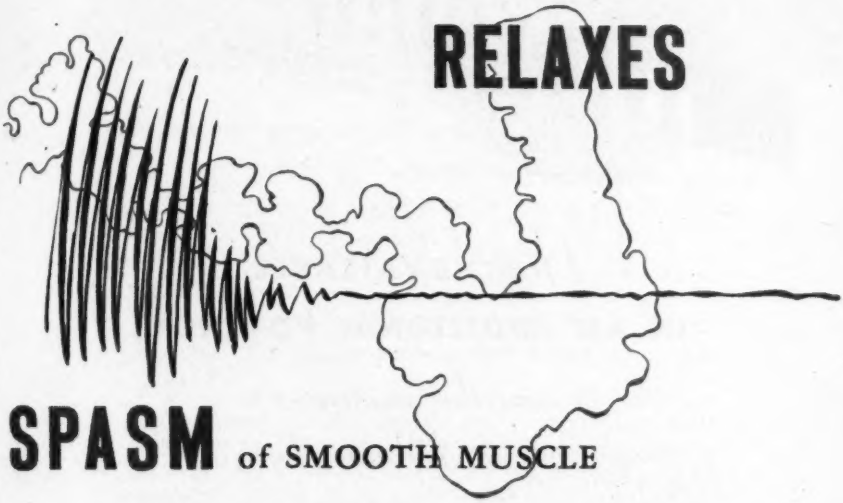
"I'll say it is," said the father. "He's expecting a convertible coupe."

*Middle age is that period in life when one's stomach goes out for a career of its own.*


### MUST'A BEEN KANSAS

A farmer's wife had become mentally deranged. As they carried her out of the house in a straight jacket he said: "I sure don't know what got into her—she ain't been out of the kitchen in 25 years."

# TRASENTINE-PHENOBARBITAL




## SPASM of SMOOTH MUSCLE

Trasentine acts selectively on the smooth muscle "receptive substance" associated with parasympathetic nerve endings in the abdominal viscera—a fact that explains the relative absence of those side effects so often produced by atropine or belladonna. The neuro-musculotropic action of Trasentine• is enhanced by the mild sedative effect of phenobarbital.

Trasentine-Phenobarbital tablets contain Trasentine 50 mg. with phenobarbital 20 mg.

• Trasentine is also available without phenobarbital in tablets of 75 mg., suppositories of 100 mg., and ampuls of 50 mg.

**Ciba**

TRASENTINE (brand of adiphenine) Trade Mark Reg. U.S. Pat. Off.

CIBA PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY
2/1370M

# *New Form of Procaine Penicillin for Aqueous Injection*

**All the advantages of Procaine Penicillin in Oil . . .**
**none of the disadvantages**

# WYCILLIN
TRADEMARK

## Crystalline Procaine Penicillin G for Aqueous Injection Wyeth

Wycillin provides a stable aqueous suspension of the new chemical compound, crystalline procaine penicillin G. It brings to the service of the physician for the first time a preparation for aqueous injection which avoids the dangers, pain and irritation of oil and wax and has many distinct superiorities:

**No oil**—avoids danger of oil embolism and oil sensitivity.

**No wax**—no pain at site of injection—no danger of tissue damage.

**Stable**—Wycillin is supplied in dry form. It is the first penicillin preparation for aqueous injection which when reconstituted with water does not require refrigeration.

**No more plugged needles**—Wycillin can be injected without drying needle or syringe—any method of sterilizing may be used.

**Therapeutic effectiveness**—a single injection of 1 cc. (300,000 units) maintains effective 24 hour blood levels in nearly all cases.

Wycillin is used in the same dosage and in the same conditions as Procaine Penicillin in Oil or Penicillin in Oil and Wax.

Druggists throughout the United States have received supplies of Wycillin by air mail. If you have any difficulty in obtaining it, please let us know so we can see that you are supplied.

Wyeth®

**WYETH INCORPORATED** **PHILADELPHIA 3, PA.**

# Teamed for efficiency

## in psoriasis

**SAS-PAR Tablets for their systemic benefits and ULTROINE Ointment to control the disfiguring scaly lesions constitute effective dual therapy that is decidely encouraging to the despairing psoriatic.**

## SAS-PAR tablets orally

Active ingredient: the valuable saponin, sarsaponin, which has a chemical affinity for cholesterol by which it neutralizes excess blood lipoids (frequently associated with psoriasis).

Conveniently administered
Pleasant-tasting
Well-tolerated gastrically
Clinically tested

2 to 6 tablets daily (or more if required) for a 3-month period.

## ULTROINE ointment topically

Offers time-honored antiseptic properties of coal tar.

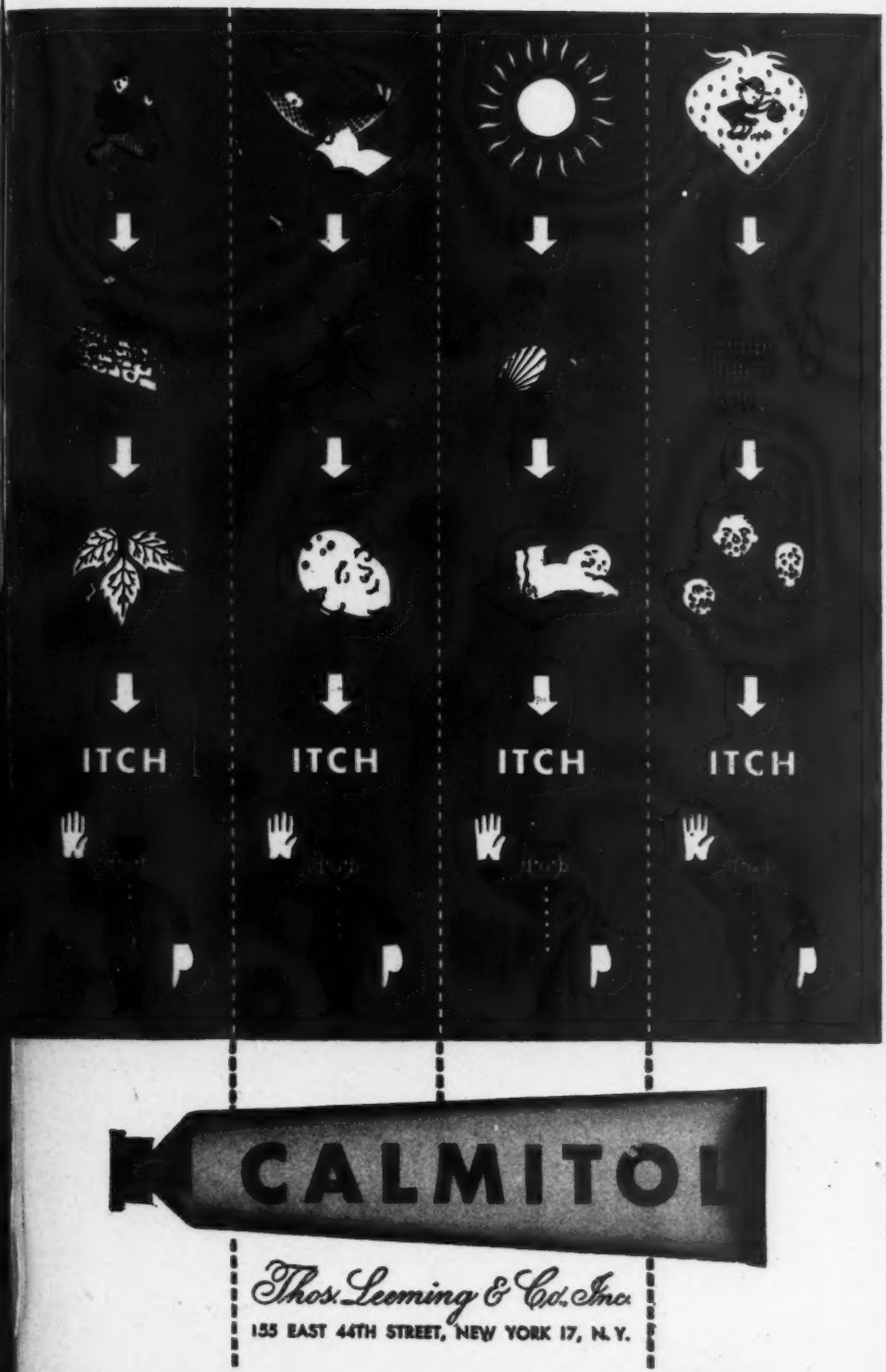
Non-irritating to skin and mucous membranes.
Readily absorbed
Non-toxic
Clean-smelling
Non-staining

Local applications twice daily after removal of scales by soap-and-water scrubbing.

*Clinical supply of SAS-PAR and ULTROINE Ointment, together with literature, gladly sent on request of physicians.*

Bischoff

ERNST BISCHOFF COMPANY, INC. • IVORYTON, CONN.




# CALMITOL

Thos. Leeming & Co. Inc.

155 EAST 44TH STREET, NEW YORK 17, N. Y.

# gen´tle (gen´tl)

# is

# the

# word

Gentle is the word for '*Agarol*'*— a mild, well-tolerated laxative which provides *three* worthy essentials for easing the bowel movement of the weakened, constipated individual— moisture, lubrication and gentle stimulation. Moisture is retained in the stool by means of an aqueous hydrophilic agar-gel. Lubrication is supplied by highly emulsified mineral oil and indigestible colloid gums comparable to mucin. *Gentle peristaltic stimulation* is initiated by pure, white phenolphthalein, U.S.P.

*Trademark Reg. U.S. Pat. Off.


***How Supplied:*** *'Agarol'** is supplied in bottles of 6, 10, and 16 fluid ounces.

***Dosage:*** The average adult dose is ½ to 1 tablespoonful upon retiring and this dose may be repeated if necessary the following morning, two hours after eating. Administration should be avoided at meal times or during gastric digestion.

# *'agarol'*

WILLIAM R. WARNER & CO., INC. New York • St. Louis